

**ABSTRACT**

An object of the invention is to provide a light source driving method for supplying electric power to a light source of a projector, and to provide a projector using this light source driving method. The projector has a lamp (2) as a light source for emitting light, a lamp driving electric power control section (3) as a light source driving section for supplying electric power for operating the lamp (2), an image pickup section (7) as an image obtaining section for receiving a projected image and obtaining image data to adjust the projected image, and a synchronous signal generating section (5) for generating a signal as an operation reference. The synchronous signal generating section (5) generates a first operation signal for determining operation timing of an electric current output of the lamp driving electric power control section (3), and a second operation signal for determining operation timing for receiving the projected image and obtaining the image data by the image pickup section (7), and the lamp driving electric power control section (3) and the image pickup section (7) are synchronously operated.